



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,280	01/02/2002	Ian Richard Aldred	13804-002001 / HH/MC/P717	8327
26161	7590	09/08/2006	EXAMINER TANG, SON M	
FISH & RICHARDSON PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			ART UNIT	PAPER NUMBER
			2612	
DATE MAILED: 09/08/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/039,280

Applicant(s)

ALDRED, IAN RICHARD

Examiner

Son M. Tang

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-11, 14-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Puglia et al. [US 6,087,972; Puglia] in view of Cern [US 6,452,482].

Regarding claims 1-4, 16-18 and 22: Puglia discloses a motion detector device comprising a signal-distorter met by phase shifter [8] comprising a semiconductor device (as diodes 97, 99 in Fig. 5), responsive to an input signal [phase shifter (clock signal 30, Fig. 4)], for influencing (shifting phase) at least one characteristic of a first electro-magnetic signal [RX]; and a mixer [6] for combining at least the influenced first electro-magnetic [RX + phase shifter] and a second signal [LO] from source oscillator [4] to produce a combined signal having a characteristic [IF signal/ direction of the object] determined by the input signal [phase shifter] [as shown in Fig. 2 and 4, col. 2, lines 51-67 to col. 3, lines 1-6 and 25-40].

Except the claimed signal distorter in the form of a field distorter, disposed adjacent to the first conductor. However, a connection by disposing a circuit adjacent to the conductor as a field-distorter to influence a signal in the conductor is known in the art as by an inductive coupling method as demonstrated by Cern who teaches an inductive coupling (1115) for injecting data signal into a power transmission cable, wherein the a circuit element (1102, 1115 and 1125) being disposed adjacent to the conductor (cable) [see Fig. 11A, col. 13 lines 42-67 to

Art Unit: 2612

col. 14, lines 1-7]. It would have been obvious of one having ordinary skill in the art at the time of the claimed invention to use the alternative inductive coupling for inserting signal influence into the conductor signal as taught by Cern in Puglia, for the benefits such as installation at any appropriate location as user desired along the conductor without having to sever the conductor.

Regarding claim 5: Puglia further discloses a signal generator [clock 30 of Fig. 4] for generating the input signal [see Fig. 4, col. 3, lines 26-30].

Regarding claim 6: Puglia further discloses a transceiver [see Fig. 2] for transmitting and receiving electro-magnetic signals.

Regarding claim 7: Puglia discloses a transceiver for transmitting and receiving signal, Puglia does not specifically teach that the transceiver has one transmit antenna and one receive antenna, it is known in the art that a single antenna can performing as transmitting and receiving. Therefore, it would have been obvious of one having ordinary skill in the art to implement two separate antennas to transmit and receive as an alternative design.

Regarding claim 8: Puglia discloses that the first electro-magnetic signal is derived from the received signal that reflects off an object [see col. 2, lines 59-65].

Regarding claim 9: The claimed that the first electro-magnetic signal (Rx) is derived from the transmitted signal is inherently in the system, because the first electro-magnetic signal is a received signal at the antenna, that is a transmitter signal that reflects off an object.

Regarding claim 10: Puglia does not specifically disclose that the second signal is derived from the received signal, however, the received signal is a reflection of an original transmitted signal which generated by an oscillator, that the oscillator signal (second signal) arrived at the mixer with the received signal is derived or related to the transmitted signal.

Art Unit: 2612

Therefore, it would have been obvious of one having ordinary skill in the art to recognize that the second signal (oscillator signal) is derived from the received signal.

Regarding claim 11: Puglia further discloses that the second signal (LO) is derived from the oscillator for generating the transmit signal [see Fig. 4, col. 3, lines 1-6].

Regarding claim 14: Puglia disclose all the limitations as described above, except for not specifically disclose that the field-distorter is configured for not radiate an electro-magnetic field in response to the input signal, however, Puglia discloses that the phase shifter (field-distorter) performing no phase shift (i.e. 0°) in response to the input signal from channel 1 (CH1).

Therefore, it would have been obvious of one having ordinary skill in the art to recognize that when the phase shifter is not performing phase shift it means that the phase shifter is not radiate an electro-magnetic field in response to the input signal.

Regarding claim 15: Puglia further discloses that the phase shifter (field-distorter) is generated the phase shifter signal (i.e. 0° or 90°) influenced with received signal from antenna, which constitutes of arranged to radiate an electro-magnetic field in response to the input signal (clock 30) [see Fig. 4, col. 3, lines 25-50].

Regarding claims 19-20: Puglia discloses a method of operating a motion detector device comprising at least one circuit element met by a phase shifter [8] and a conductor [from antenna 10] bearing a first electro-magnetic signal [reflection signal] [see Fig. 2] the method comprising:

- applying a signal [clock 30] to the circuit element [8] to vary the electrical or electromagnetic characteristics of the circuit element and thereby influence at least one characteristic of the first electro-magnetic signal; and

-producing an output signal indicative of the degree [e.g. 0° or 90°] of influence exerted on the first electro-magnetic signal [as shown in Fig. 2 and 4, col. 2, lines 51-67 to col. 3, lines 1-6 and 25-40]. Puglia does not specifically disclose that the circuit element being disposed adjacent to the conductor, the claimed limitation has been considered in claims 1-4 above.

3. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Puglia et al. in view of Cern in claim 1 above, and further in view of McMaster [US 4,660,024].

Regarding claims 12-13: Puglia and Cern disclose all the limitations as described above, Puglia further discloses a signal analyzer (met by circuitry 14, of Fig. 3 and 6) for monitoring the characteristic of the combined signal to determine the movement of an object in a monitor area as described above, except for not specifically disclose that the characteristic of the combined signal used to determine the correct operation of the detector device, McMaster teaches an intruder (motion) detector which comprising a supervisory circuit uses to monitor malfunction of any component part in the detector (e.g. transmitter and etc.) [see Fig. 1, the Abstract and col. 2, lines 10-16, and col. 4, lines 1-16 and lines 338-68]. It would have been obvious of one having ordinary skill in the art at the time of the claimed invention to modify a malfunction supervisory feature as suggested by McMaster, in the detector of Puglia, in order to prevent fault alarm and increase safety.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Cecic et al. [US 5,504,473], Zhevelev et al. [US 5,936,524], Pantus [US 4,647,913], Hoseit et al. [US 5,581,236] and Guichard et al. [US 5,519,317].

Art Unit: 2612

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son M. Tang whose telephone number is (571)272-2962. The examiner can normally be reached on 4/9 First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Wu can be reached on (571)272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Son Tang


BENJAMIN C. LEE
PRIMARY EXAMINER